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THE SHEEP INDUSTRY OF THE UNITED STATES

By A. C. BIGELOW,

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We have been forced to consider the fact, emphasized by rising prices during the past few years, that there is a problem before us in relation to the food and clothing supplies for our population of one hundred and two million people now within our country. The present acute situation in regard to our food supplies and our supplies of wool, as a result of the world war, is simply a situation towards which we have been gradually but inevitably drifting for years past. We have exhausted the areas of the fertile lands which were once the safety valve for our growing population, and we must now obtain a greater production of those things which are essential for our subsistence by an increase of efficiency and intelligent development of agricultural methods. We shall, moreover, be forced to utilize portions of our country which have been previously neglected for the more accessible and more fertile portions of our land. A few figures will illustrate the diminishing per capita production of some of our leading staples and exhibit a reason for the advance in the cost of many of our necessary food commodities. During the period covered by the last census, from 1900 to 1910, I submit the following figures:

Acreage under cultivation *per capita*: A decrease of 10 per cent

Butter production *per capita*: A decrease of 10 per cent

Corn production *per capita*: A decrease of 21 per cent

Oats production *per capita*: A decrease of 11 per cent

Wheat production *per capita*: A decrease of 15 per cent

The decrease in the number of sheep per 1,000 population from 1900 to 1915 was 48 per cent.

It is probably worth while to explain briefly the development of the sheep industry in this country. As you will readily understand, it was natural that it should start in the eastern states, as the original merino sheep came mostly to us from Spain in the early part of the last century. The New England states in the early days showed quite a rapid development, and Vermont was at one time a large sheep producing state. In that state the number of sheep were as follows:

VERMONT	Year	<i>Number of sheep</i>
	1840	1,681,819
	1860	752,201
	1880	439,870
	1915	47,415

Following the advance westward of population, sheep were largely kept in New York, Pennsylvania and Ohio. During the ten years from 1870 to 1880, there were close to 5,000,000 sheep in the state of Ohio. In 1890 the number dropped to 4,000,000, while in 1915 they were reduced to 2,100,000. Still advancing westward, and following the lures of cheaper lands, we find that Texas has as follows:

TEXAS	Year	<i>Number of sheep</i>
	1880	3,000,000
	1890	4,260,000

But with the advance of the farming element, restricting the areas of cheap land, Texas dropped in 1915 to 1,600,000 sheep.

In California we find as follows:

CALIFORNIA	Year	<i>Number of sheep</i>
	1880	5,727,000
	1890	3,373,000
	1915	1,900,000

During this period it should be noted sheep were kept for the wool product alone. We were educated as a beef-eating people, and our immense supplies of cattle made beef cheap. Mutton at this time was an insignificant factor in the profit and loss account. This situation has now changed completely. The supply of cattle is decreasing so materially that beef is advancing greatly. Mutton and lamb have been improved in quality, and there is a good demand for both today. Results carefully taken at the Pennsylvania State College show that the mutton product of sheep represents about two-thirds, while wool today represents about one-third, making wool a by-product; so that the market fluctuations in wool, which will always occur to a certain extent, will not have any great effect, on the profit account of the sheep industry.

With the restriction of the cheap lands in Texas and California, the bands of sheep were driven up into the mountainous grazing limits of the northwestern section, and there we find for many years a great increase in the number of sheep, especially in the states of

Wyoming, Idaho and Montana. But here, too, within the last few years, we can find from the same cause a decrease in the flocks—the homesteader and farmer are coming in, the ranges are restricted and production has decreased. In effect, the whole industry has moved like a great wave, on the lines of least resistance, utilizing cheap grazing lands as long as they were cheap, and showing a decrease as soon as they were occupied for agricultural purposes. The great northwestern grazing territory, comprising the states of Montana, Idaho, Wyoming and Oregon, containing vast areas of free or very cheap grazing lands, has been the great source of wool and mutton production during the present century. These four states in 1916, out of the total wool clip of the United States of 288,000,000 pounds, produced 86,255,000 pounds, or about 30 per cent.

There has been during the past seven years, however, a continued shrinkage in the production from these four states, caused by the over-stocking of the ranges. During the session of the last Congress an act was passed opening up the government lands in this section to the farmers in tracts of 640 acres. We sent a special agent into this section to make a survey of conditions and to locate breeding stock. The reports we have received from him and from other sources, indicate that there is a great rush of farmers coming into this section and taking up these 640-acre tracts, and in consequence the range is being broken up to such a great extent that those who have been maintaining sheep there are being forced to dispose of their flocks, and the evidence is conclusive that there will be a continuous decrease in this section. It is quite evident, therefore, that the population of the United States will be seriously affected by this rapid decline in this great sheep territory. There is only one source left open now from which we can obtain an increase of sheep production, and that is in the farming sections east of the Mississippi River, and in the unused land areas of the south.

In all matters political, social and economic, change is the law of the universe. As in the past, economic conditions operated to drive the shepherd of the East out of business, and to develop the great sheep interests of the western grazing lands, so today again, economic conditions are forcing the western flockmaster out of business and opening up a favorable opportunity for the profitable maintenance and development of the sheep industry in the older sections, which have been so long neglected.

The situation which presents itself to us, therefore, shows that population for a number of years has been encroaching upon our production of food and of wool for clothing. It shows that the conditions brought about by the great war in progress have developed a world shortage of wool supplies, and it shows that our own domestic production in the great northwestern territory will develop a very decided decrease from that section, which has been such an important factor in our wool production. Based on all the premises submitted regarding the extraordinary market which will be opened for wool especially, and for the product of meat which our rapidly increasing population must have, it is safe to assume that prices will be maintained upon a very high level, and that the opportunity presents itself to those who have lands suitable for the maintenance of sheep to engage in sheep husbandry as a very profitable business.

I have touched upon sheep husbandry mainly in connection with its meat and wool product. There is another consideration which I wish to emphasize, and that is that the sheep is known to be one of the best fertilizing agents of any kind of livestock. This has long been generally recognized by shepherds, and their appreciation of this fact has been shown by their use of the term "The Golden Hoof," as applying to this feature of sheep husbandry in its relation to the fertility of the soil.

The leading cause for the decrease in the sheep population in the farming sections during the past ten years, has been on account of the depredations of dogs upon the farmers' flocks. In support of this statement I beg to quote the following from a bulletin issued by the United States Department of Agriculture:

Sheep-killing dogs are not only recognized as the worst enemy of eastern flockmasters at the present time, but are known to be the principal cause of so marked a decrease in the number of sheep kept on farms. The moral effect upon all persons who have seen sheep killed, injured or frightened by dogs is far more destructive to the industry than the actual damage sustained.

The evidence is conclusive not only as to the effect on the sheep industry in our farming sections in the past, but it is also conclusive that this is the great factor which is now deterring our eastern farmers from going into the sheep business again. It seems strange that an intelligent nation striving for efficiency in all things, should allow a useless economic parasite like the dog to throttle a great industry, and yet such is the fact. There is no problem more neces-

sary for solution today than this problem of protection of sheep from the attack of dogs. It is necessary for the public to recognize this situation and interest themselves to see that there are proper laws enacted which will control this dog menace. It is not only necessary to have proper laws enacted, but public sentiment must see that these laws are *enforced*. No other animal is allowed to roam at large to act as the destroyer of the property of citizens. The aim, therefore, of proper legislation should be that those who insist upon keeping dogs shall keep the dogs where they belong, and that is upon their own premises or under their direct control. The fundamental basis of the social fabric is that every citizen is entitled to the protection of the law for his life and for his property. The fundamental basis of good morals is that no one has the right to do anything which will do damage to his neighbor. Let him who will, keep his dog and enjoy his companionship. We will concede all of his good points, but knowing his destructive tendencies and his predatory nature which he has inherited from his wolfish ancestors, let it be fully recognized that the dog must no longer be allowed unbridled liberty to follow out his natural instincts of destruction. Under the present conditions and those which face us for the future, it is an economic crime to allow the dog to further handicap the development of an industry which is so vital to the nation. Great areas of land are idle and unproductive today which can produce those things we need. The decision on this matter rests with the people.

The Philadelphia Wool and Textile Association started its campaign to awaken interest in the sheep industry about two years ago. It has been necessary to overcome the inertia of twenty years of neglect and indifference. A wide and persistent propaganda has been instituted and directed to awaken the interest of the public to this as an economic proposition, and to awaken the interest of the farmer to this industry as a profitable and desirable part of agriculture. It has been recognized that it is necessary to develop this proposition on broad, intelligent, and constructive lines. The present generation in our farming communities to a large extent do not know or value sheep, for the older shepherds have passed away. It is evidently desirable that the boys and girls of the coming generation should be educated to a knowledge of and a love for this useful animal. One of the lines of work therefore decided upon, is to

endeavor to provide for the organization and development of as many boys' and girls' sheep and lambs clubs as possible. In the old days, too, there was no proper, scientific recognition of the value of breeding. The influence of pure bred stock and its value was not appreciated. The further purpose of our work is to develop an improvement in the breeds of sheep by the use of pure bred stock in breeding, and in connection with this, to obtain a better standardization in communities, in the same way that the various sections of England have developed a standard production, the value of which is known and recognized. It is recognized also that there is an evident necessity for an improvement in the system of marketing and distribution, both for lambs and for wool. To effect this, it seems highly desirable that there should be developed to the greatest possible extent coöperative associations of the farmers. This has been found difficult to obtain in the past, and will undoubtedly be a slow process, but will surely be accomplished in time.

In order to develop better marketing facilities for the wool product for the farmer, the Philadelphia Wool and Textile Association has established The Philadelphia Wool Auctions, the purpose of which is to provide the means whereby the individual farmer or such coöperative associations may be able to sell their wool in one of the great primary markets of distribution at public sale under open competition to the highest bidder. The development of this proposition, like others intended for this purpose, must naturally be slow, but it seems sound and logical and should win out in the end.

The stage has been reached, however, at the present time, where the value of sheep is being recognized by the eastern farmers, and they are desirous of obtaining breeding stock. There has been but one source of supply for this and that is from the western range. It will be readily understood that there is a big hiatus between the farmer in the east, who desires to buy a small flock for his farm, and the far distant range, where the sheep are maintained in flocks of from five thousand to fifty thousand. In order to bridge this gap and to afford an agency by which a transfer could be made of the western sheep into the east, and the distribution made as wanted to the farmer, the Interstate Livestock Company has been organized and incorporated, which is acting as the financial agency for this purpose.

The capital of the Interstate Livestock Company has been subscribed by public spirited men who are operating this company on a non-profit basis. Through this agency breeding sheep have been brought in large quantities from the western range, and are being distributed throughout the eastern farming sections.

The effort to restore sheep husbandry to the eastern farms has therefore reached a definite, practical stage of operation. There is evidence that there will be a greater appreciation of the value of this industry by every one. Though there are many obstacles and problems in the way to be solved before sheep husbandry will attain its full development in our farming sections, there is every hope and assurance that it will obtain its rightful recognition and be restored to its proper status in connection with eastern agriculture. It will not be accomplished in a day nor in a year, but the logic of events and its imperative necessity, are bound to bring about its ultimate establishment.

THE WAR AND OUR POTATO INDUSTRY

By Lou D. SWEET,

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Our entrance into the war against Germany brought us face to face with serious economic problems—greater problems than we were ever confronted with before in the history of this country. One of the greatest of these problems was that of our food supply. Not only did it become necessary for us to produce crops sufficient to take care of our own needs, but coincident with our alliance with the Entente Allies we were called upon to supply in great measure the foods needed by soldiers and civilians of the allied countries.

Our federal Department of Agriculture appealed pointedly to the farmers of this country for an increased production of all food crops. This appeal met with immediate response, often accompanied by great sacrifice by farmers themselves who had to finance their operations with borrowed capital. Particularly in the case of our potato crop has this response been tremendously patriotic; an additional seven hundred and seventeen thousand acres were planted to this crop, which early this season was forecasted by our federal